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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,468	03/25/2004	Yuichiro Murayama	Q80229	6290
23373	7590	01/06/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			RESAN, STEVAN A	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,468

Applicant(s)

MURAYAMA ET AL.

Examiner

Stevan A. Resan

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3-25-04 & 7-26-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1773

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim does not appear to further limit claim 1 since claim 1 already requires a middle layer.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al US 6074724 in view of any one or more of Nishimatsu et al US 4596747, Shimozawa et al US 4746558 and Bilkadi US 5639546.

Inaba et al discloses a magnetic recording medium comprising: a non magnetic support, a lower layer comprising a non magnetic powder dispersed in a binder, and a magnetic layer comprising ferromagnetic powder dispersed in a binder as in claims 1, 7 (Col 4 lines 16-53; Col 9 line 45-Col 10 line 8). The binder may be a polyurethane resin as in claim 9 (Col 4 lines 32-35) The thickness of the non magnetic and magnetic layers encompass the ranges in claims 13,14 (Col 13 lines 37-43). The magnetic layer of Inaba et al has a surface with projections in the ranges claimed in claim 1 (Col 17 lines 29-37) and carbon black is taught to be contained in the lower(middle) layer as in claim 11 (Col 11 line 63-Col 12 line 21).

Inaba et al disclose that the non magnetic support may be provided with an adhesive layer on the side to be coated with the magnetic composition. (Col 14 lines 33-36)

Inaba et al do not teach details of the adhesive layer.

However Nishimatsu et al teach the use of a 0.1 micron thick primer layer (in the range of claim 12 See .Col 11 line 9) comprising a radiation curing compound .(Col 6 lines 16-32,53-56). Nishimatsu et al teach that such coatings are old in the art to improve adhesion (Col 1 lines 17-21; 42-45; 59-62) and obtain a medium surface having excellent smoothness (Col 2 lines 3-4). The radiation curing compounds taught by Nishimatsu et al include those meeting the limitations of claims 3-6, 10.

Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency.

In re Fount 213 USPQ 532 (CCPA 1982); In re Siebentritt 152 USPQ 618 (CCPA 1967); Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co. 85 USPQ 328 (USSC 1950).

Therefore it would have been obvious to one of ordinary skill in the art to use the primer of Nishimatsu et al as the adhesive layer in the medium of Inaba et al motivated by the desire to improve smoothness and eliminate the necessity of using volatile solvents varying the radiation cure compounds to optimize performance.

Shimozawa et al is provided for additional evidence of the use of a radiation cured layer containing a radiation curing compound (Col 10 lines 11-14) and the use of combinations of these compounds (Col 5 line 61- Col 6 line 59). Shimozawa et al also

teaches the use of Barium Ferrite magnetic powder (a hexagonal ferrite as in claim 8) in the magnetic layer in order to better control surface roughness.

Bilkadl is provided as additional evidence of the use of radiation cured radiation curing compounds as adhesion promoting primer compounds for magnetic recording media. Note pentaerythritol triacrylate (Sartomer SR 440) used in Example 1 of Bilkadl and example 1 of the present specification example 1.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stevan A. Resan whose telephone number is 571-272-1513. The examiner can normally be reached on Tues-Thurs from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached at 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


STEVAN A. RESAN
PRIMARY EXAMINER